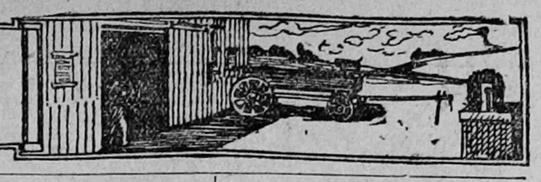
NEWS AND VIEWS OF FARMERS



RUDIMENTS OF FARMING

Valuable Instructions to Boys Regarding the Growing of Farm Crops.

BY HIRAM H. SHEPARD.

Field and garden plants must have soil room in which their roots can spread.

The rows should be far enough apart and the plants far enough apart in the rows so that their roots will not interfere with each other in their search for plant food.

Crowded plants grow small and produce small and inferior fruit, while plants given plenty of room may grow to large size and produce an abundance of large, perfect fruit.

In planting and cultivating farm and garden crops we should always keep in mind the action of the roots.

To this end, the soil should be plowed or spaded deeply to make it soft and loose. After plowing, the soil must be made fine and even.

It must not contain large, hard lumps or clods, for plant roots cannot easily and quickly grow through them.

Plowing the soil deeply allows the roots of cultivated plants to easily grow downward and outward. Making the soil fine with the harrow or other cultivator not only makes it loose for rapid root growth, but also makes it hold moisture for them.

Fine, deep, fertile and well mixed soil is said to make a comfortable home for the roots of growing plants. This means that such soil is in a good condition for rapid root action, hence a correspondingly rapid growth of the plants which they feed.

Most cultivated plants are planted in the spring or early summer when the soil is moist.

When they first begin to grow their roots are short, hence cultivation should be done while they are young.

The reasons for this are that the cultivator breaks to pieces clods left by the plow or harrow.

Stirring of the soil mixes it and makes it fine and allows the entrance of air, which is also needed for the life, health and growth of the roots.

If the air is shut out of the soil in which plants such as corn and potatoes are growing the roots cannot act, and the whole plant sickens and dies. For instance, if water stands on a field of corn for a few days the corn will die. The standing water sinks into the soil and, being heavier than air, it forces the air out and the corn roots smother for want of oxygen.

Other reasons for giving plants most cultivation when they are young are for the killing of weeds which would rob them of plant food in the soil and shut out needed light and air.

Also at that time the cultivator may be run deep and close to the plants without injury to their roots.

The young plant, too, must be kept growing vigorously all the time. If it is allowed once to become stunted in growth it can never afterward be made to grow into a large, perfect plant.

After field and garden plants grow large and need cultivation to kill weeds and admit air into the soil the cultivation then should be shallow.

When plants grow large their roots fill all the soil from row to row and many thousands of them are near the surface. If the cultivator shovels run deep they will destroy many of the feeding roots, and hence injure the growing plants.

It is best farm and garden practice to cultivate crops frequently and well while the plants are young; then there will be no need of cultivation when the plants are maturing or ripening.

Cultivation in general should have as its aim the keeping of the surface layer of the soil broken and in a fine condition.

The Ladies' Silk Culture society of California has several acres planted to mulberry trees and they plan to teach children the silk industry.

BEE HIVE CONVENIENCE

The following is a description of an alighting board for bees which has many good qualities.

Put two small cleats on the under side of the board with nails and then drive a ⅞ end of wire through the board and cleat, leaving out the stout end hook. Hook the stout end into the entrance so as to catch inside of

the hive. Your alighting board is as wide as you want it and will not get out of place either on a hive on the ground or on one on a high bench.

Bend the wire at such length as to leave no space for the bees to jump over from the board to the hive. An old barrel will furnish stuff to make them, some staves being plenty wide, or a biscuit or cracker box, when one has no lumber to cut up. Wire should be near the end to be out of the way.

THINNING PLUM TREES

We have a small Burbank plum tree in its third year of bearing from which we thinned two bushels of young fruit last season to prevent the breaking of the limbs. Fully as much fruit remained and ripened beautifully.

This plum tree bears a very heavy crop every year. That is its only fault—setting such a heavy crop that it causes the death of the tree unless severely thinned. Those who do not have the courage to properly thin the trees often find them dead the following spring. It is a Japanese plum originated by Luther Burbank of California, and though he has originated many remarkable plums this seems to be the best, all things considered. It is perfectly hardy everywhere, requiring little except close care and pruning and thinning the fruit. The tree is not handsome, being of sprawling growth and long, slender branches, and being flat on top and broad rather than tall. When loaded with fruit, however, one might even call it handsome.

The fruit grows in clusters, six or seven plums frequently being found together. It is a coppery-red color, with yellow spots showing through, and the side towards the sun takes on a decided purple shade if left till fully ripe. The pulp is deep yellow, coarse but juicy, and the pit is very small. The plums are fine for use when fresh, but also can well, the pulp adhering to the pit so firmly that they retain their shape well when cooked.—Mrs. H. H. Woodward, Michigan.

WE ARE FOND OF SUGAR

Uncle Sam has a big sweet tooth.

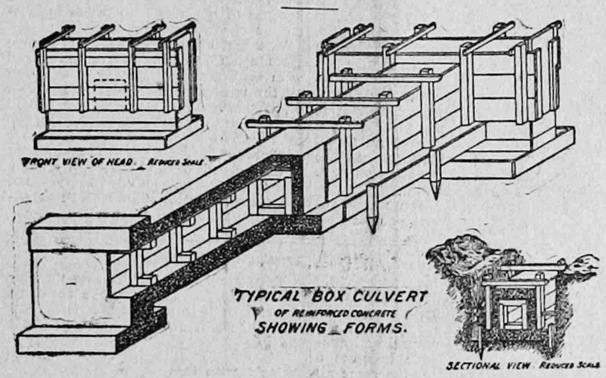
We Yankees consume nearly 400,000 tons of beet sugar every year and still are hungry enough to buy 3,000,000 tons more from Europe. This is not all beet sugar, but it is sugar and costs millions.

We have fifty-seven sugar-beet factories working three months each year, grinding, boiling and squeezing the sugar out of nearly 40,000 tons of beets every working day, but this does not nearly fill our wants.

These facts are encouraging to beet growers—or ought to be.

A full-grown fox was killed at Atlantic City, N. J., by a game rooster owned by John Carroll. The fox seized a plump hen from the roost, and the game cock flew at him. He sunk his long spurs into the fox's eye, reaching the brain. The Reynard fell over a corpse. When Farmer Carroll opened the coop he found the rooster strutting over the fox's body.

MACADAM ROADS



STANDARD CULVERT OF MASSACHUSETTS STATE ROADS.

BY AUSTIN B. FLETCHER.

The macadam type of road surfacing is particularly well adapted to main highways connecting centers of population on which there is moderate travel.

It is not an economical form of pavement for the main streets of cities and large towns and it is usually too expensive for country roads other than the main highways.

It resembles closely a gravel road. When a road built of gravel is not quite sufficient to resist successfully the wear and tear of the traffic over it macadam surfacing may usually be substituted for the gravel with satisfactory results.

Sometimes a macadam surface may be used with economy when the conditions are such that a gravel surface would satisfy the demands of traffic but good gravel cannot be obtained at reasonable cost.

For ordinary country roads experience has shown that the broken-stone surface need not be more than from twelve to fifteen feet wide if suitable shoulders are built on each side. Twelve feet allows two vehicles to pass each other safely. Fifteen feet is more satisfactory, particularly when motor vehicles are passing each other. If the stone is less than twelve feet wide there is a likelihood that the edges of the macadam will be sheared off by wheels unless the shoulders are made of especially good material. Whatever may be the width of the stone, the shoulders should be firm enough to permit the occasional passage of wheels over them.

Until within comparatively recent years it has been almost universally the practice to build thick macadam roads. Roads less than eight inches thick were rarely heard of, and often a thickness of at least twelve inches of macadam was thought to be necessary for good results.

The more recent practice is to make the macadam surface as thin as possible, yet with sufficient body to stay in place, the theory being that the macadam is only a wearing surface. By lessening the thickness of the macadam much expense may be saved, since the foundation materials are usually less costly than broken stone. The macadam should be hard, smooth and impervious to water. Much attention must be given to the foundation. It should be composed of porous material free from clay or loam, firm, and sufficiently strong to sustain any load likely to come upon the road at any time of the year.

In new work, where no macadam has been laid before, three inches of macadam after rolling is the least thickness which is practicable; and, except in unusual cases, a depth greater than six inches after rolling is rarely necessary if the foundation is suitable.

The ordinary macadam road is usually from twelve to sixteen feet wide, with shoulders three to five feet in width on each side of the broken stone. The thickness of the macadam is usually six inches at the center and four inches at the sides, or a uniform depth of six inches throughout.

HONEY BEES PROFITABLE

Honey Is Healthful and Always Commands a Good Price if Marketed Properly.

BY F. G. HERMAN.

Honey does not injure the teeth as candy does. It is an excellent remedy for most of the lung and throat affections and is a good substitute for cod liver oil. Honey is laxative and sedative and is especially valuable in cases of bladder and kidney diseases.

Thousands of bees pour in and out of the hives many times a day; thousands more swarm over the combs, each untrammeled by rules and with no set task. No bee works for itself; the multitude works as though it were one bee.

If you desire to advertise your honey and work up a trade, place your name and address on every package. Labels are all right for glass jars, but for comb honey either have a printed carton or stamp your name on the section with a rubber stamp. If you are capable of producing a fancy article you deserve the credit for it and all of the trade there is to be had. There is nothing like establishing a good, honest reputation for yourself. Do this and your honey will sell itself.

One day while working in the apiary a gentleman watched me. He was anxious to know how I managed to get the honey from the hives. He asked, "Was it at night when all the bees are asleep?" That, of course, would be the very worst time of all, for bees know nothing about sleep, but work twenty-four hours a day. There is plenty of work for them to do in the hive at night, such as evaporating the honey, building comb, etc.

It is the custom of bee keepers generally to select warm and clear days in which to perform the operations of the hive. The older bees that constitute the field force are out then in quest of nectar and pollen and the manipulations are more easily performed.

Bees that are swarming or those that are out in the fields gathering nectar and pollen very seldom volunteer an attack. Of course a bee hive should not be pulled apart every few days for mere curiosity, but examined only occasionally to ascertain progress.

Why do bees swarm, anyway? Why don't they settle down and stick to their knitting instead of breaking up housekeeping just at a time when everything begins to look prosperous? Well, the fact is prosperity breeds discontent, and the old home is becoming too crowded. Besides, it is nature's way of providing increase and prolonging the race. Providence has given the honey bee this instinct.

STRAWBERRY PLANTING

My strawberries are set out the first week in May, and it takes a week to dig and set the plants, which is plenty long enough to leave the weeds, so I start the cultivator just as soon as I get through setting and keep it going as the weeds show themselves.

I think that there is no danger of over-cultivation. I narrow up the cultivator as the runners spread and try to leave the plants in uniform matted rows two or two and a half feet wide. Right here let me say that I long ago gave up trying to carry over an old bed, as I would rather set new every spring and care for the new bed than clean out an old one. I used to try setting in the fall, but it only gave me extra work in weeding with a greater percentage of winter-killed plants that had to be reset in the spring and, worst of all, an inferior quality of fruit. So I abandoned fall setting altogether.

I do not trim the roots, although I like the plan. Time is worth too much. I use in setting a hoe. Buy a new hoe, as good a one as I can find; cut the handle off to fifteen to eighteen inches long, then cut one side of the hoe off to a point, the right side for a right-hand man and the left side for a left-hand man. I find this tool very valuable in weeding, so much so that most of my men choose it in preference to any other.

Taking this hoe and sticking it into the ground its full depth and drawing it toward me enough to give room for the roots of the plants to set behind it so that the roots will be straight down in the ground, I then place the plant in and withdraw the hoe, and, taking both hands, press the plant in firmly, the harder the better, unless the ground is very wet.

SPRING BERRY NOTES

BLACKBERRIES AND RASPBERRIES.

Don't neglect to cut out all of last year's bearing canes, if you have not done so already.

Don't forget to burn these old canes; they are a menace to the coming crop, as they are likely to contain diseases and insects.

Don't overlook the fact that the suckers must be cut away from each hill, leaving only four or five strong ones to each hill for next year's crop.

Don't act as though you had a grudge against all these berries; but give them good soil, proper cultivation, reasonable care and attention, and they will pay you in many ways.

Don't plow too deeply during the growing season, especially, or you will destroy the small roots feeding near the surface.

Don't forget that these cane fruits are not octogenarians; new plantations must be made every few years.

CURRANTS AND GOOSEBERRIES.

Don't fail to start a few new plants by burying good, strong branches, leaving the tops out of the ground a few inches, and tying them to stakes. They will be rooted by fall.

Don't forget that the currant worm hates powdered white hellebore, either in dry form dusted upon the leaves or in solution. This is also good, or rather bad, for the span or measuring worm that prefers gooseberry leaves.

Don't think any old corner in the garden is good enough for the gooseberry. Just get a few really fine sorts and give them good care and see what a fine berry the gooseberry really is with half a chance.

Don't neglect to cut out all the old shoots of the currants, and allow only five to eight bearing branches—that is, if you want exhibition berries.

CHAMPIONSHIP WINNER

Dr. Hartman, winner of first and reserve championship, World's Fair, St. Louis, 1904. Owned by J. F. Cook & Co., Lexington, Ky.

HINTS ON FARM WORK

Fowls showing symptoms of tuberculosis should be killed and burned or buried away from where the rest of the flock wanders.

When selecting eggs for hatching choose those of medium size, perfect shape and having shells that are evenly colored, instead of spotted or streaked with two shades, as this denotes uneven thickness of the shell.

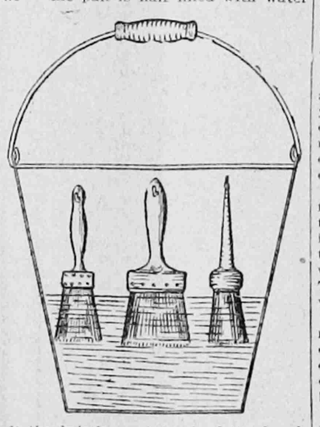
The washtubs should be emptied around grape vines or bush fruits on wash day. The dirty wash water contains a considerable amount of fertilizing matter which is lost if the water is poured into a drain to produce foul odors in it.

To plow deep is all right if it is stubble land; but in plowing sod for corn four inches is plenty deep. This leaves the grass roots in the best places for corn to benefit by the plant food they contain, and when the land is plowed the next year, by plowing six or eight inches deep the richest part of the soil is not on top where the roots can reach.

Carrots and mangel-wurzels, or mangolds, are two neglected crops that are valuable and easily grown. Either of them produces heavily on good corn land and makes excellent winter feed for all kinds of live stock and poultry.

TO KEEP PAINT BRUSHES SOFT

Take a common water pail, paint it well on the inside and drive small nails into the side of the pail near the top. Place them low enough so that when the pail is half filled with water



all the bristles and head of the brush will be immersed. By this means brushes can be kept in fine condition just as long as water is kept in the pail. Never place a brush in water previous to using it, because the water will cause it to become soggy and wholly unfit for painting.

WOOL MARKET FAVORABLE

Reduced Yield in Other Lands Has Given the Industry an Impetus in United States.

BY C. MILLER.

The fact that the woolen manufacturers of the United States have been obliged to import millions of pounds of wool in order to keep their mills going has revived interest in the question of sheep raising in many parts of the country where flocks have not been maintained for many years.

The demand for lamb and mutton at prices higher than they have been for a generation has kept down the flocks so that the total increase in the number of sheep in the United States has been but 10 per cent in twenty-five years.

The world's production both of sheep and wool has been greatly lessened in recent years by disasters which have overtaken the industry in two of the greatest sheep growing countries, Argentina and Australia. In the former country disease has killed millions of sheep.

In Australia only a narrow strip along the coast line is sufficiently watered by rains to permit of diversified farming.

Another belt interior to this, but narrow in proportion to the whole continent, is suitable for grazing, and on this belt the vast flocks of sheep are maintained.

The dry season is long, and it is necessary to resort to water holes, which the rains, in their brief season, fill and provide stores for the long period of drought.

For the past few years the heat and drought in Australia have been extraordinary. The water holes have dried up and millions of sheep have perished of thirst.

It is likely, therefore, that so long as the wool supply of the United States furnishes but little more than half of the amount needed by our manufacturers sheep raising will remain a very profitable industry, and there will be little danger in the next decade of our overstocking either the mutton or wool market.

However, the United States is not the only country which shows a languishing condition of the wool industry.

In Germany the decrease has been marked, but whether because of the low price of wool or of the high price of lambs we are not advised; although it is likely that owing to the higher prices for meats which have prevailed in Germany in the last few years the flocks have gone to the butchers, as they have in our own country.

The farmer naturally favors the quickest market. A lamb can be turned into money in a much shorter time than wool, and when the prices are advantageous the lambs go to the butcher.

YARD AND GARDEN

If your lawn is larger than you can care for properly, plan now to have it of suitable size by filling in with hardy, thrifty growers that will take care of themselves.

Don't neglect to drop a few seeds of perennials in the bare places this month for bloomers next year. Seedlings cost but little, while plants are expensive. Many beautiful things can be raised from a package of mixed seeds of perennials.

Now is a good time to plan changes in the border and the flower garden, and do not make the same mistake this year and plant the tall growers in front of the low ones; in grouping ill-matched plants and mixing inharmonious colors, keep a notebook and pencil in hand.

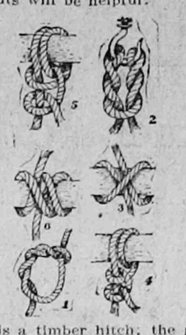
In arranging the home lot, whether for fruit, shade or ornament, plant the tallest growers well to the rear, grading down to the lowest or creeping things, letting the rows run east to west, that all may have the sunshine. They can thus be seen to the best advantage and prove a joy forever.

Plant crocuses anywhere; they are never out of place. Many of the cheaper bulbs are very fine for borders and for the house. Send for the catalogues. And then send for the bulbs.

Don't buy spongy, soft bulbs if you want good results. The bulbs worth having are solid and heavy. Heavy Dutch bulbs of the single variety make fine plants and give fine spikes of flowers, but many prefer the double flowered ones for the house. Insist on having good, fresh stock. Send your order early.

SOME USEFUL ROPE TIES

Every boy on the farm ought to learn how to make knots which will hold and which can be easily untied. The following suggestions illustrated by the cuts will be helpful:



No. 1 is a timber hitch; the greater the strain the tighter it will hold.

No. 2 is a catspaw, an endless loop utilized where great power is required.

No. 3 is a clove hitch and shows its application around a pole.

No. 4 is an application in securing a rope to a timber used in scaffolding.

No. 5 is a fisherman's bend, useful when a thick rope is made fast to a ring.

No. 6 is a rolling hitch used chiefly in making one rope fast to another when held tight.

RAIL FENCE PHILOSOPHY

A great many men have beautiful theories about farming, but they do not stand the test of actual experiment. These men are like those dreamers who write books telling people how to get rich, but who have to borrow money to pay the rent.

A farmer's success is not always measured by his acres. There are better things in life than mere land.

Vaudeville is all right on the stage of a city theater, but sadly out of place in a farmers' institute.

Some one has said that as weeds keep us busy cultivating the soil they may be blessings in disguise; but most of us would rather receive our blessings in the regular way.

The boys who leave the farm for the city and succeed there are all thoroughbred.

There is no one thing that does a farmer more good than to travel among the successful farmers in other sections of the country and study their conditions, study their system of crop rotations and how they market their products.

The man who is always asking your advice seldom follows it. He is just feeding you one form of flattery.

SKIM MILK FOR PIGS

An interesting feeding test by the Storrs Connecticut experiment station shows that skim milk alone is too bulky for pigs and that it costs more to produce 100 pounds of gain than most other feeds.

In this experiment the test covered eighty-six days. Three pigs fed skim milk only, weighing on an average 24.3 pounds at the beginning, gained 62 pounds in 86 days. The average daily gain was .72 pound; 2,739 pounds of milk were required for 100 pounds of gain at a cost of $5.48.

Three pigs fed grain and skim milk (1 to 4), weighing on an average 24.5 pounds at the beginning, gained 119 pounds in 86 days. The average daily gain was 1.38 pounds; 935 pounds of

FED SKIM MILK.

skim milk, 233 pounds of grain were required for 100 pounds of gain at a cost of $4.20.

Three pigs fed grain and skim milk (1 to 8), weighing on an average 25 pounds at the beginning, gained 110 pounds in 86 days. The average daily gain was 1.28 pounds. The feed required for 100 pounds of gain was 1,341 pounds of skim milk and 168 pounds of grain and cost $4.36.

Three pigs fed grain only, weighing on an average 25.3 pounds at the beginning, gained 40 pounds in 86 days. The average daily gain was .47 pound. The feed required for 100 pounds of gain was 445 pounds and cost $4.45.

FED SKIM MILK AND GRAIN IN PROPORTION OF 1 TO ¾.

In this trial the largest and most economical gains were made by those lots receiving milk and grain in combination. The least gains were made by the lot receiving grain only. At the arbitrary prices assumed for feed the lot receiving skim milk only made gains at the the greatest cost.

BILL OF FARE FOR HENS

Monday — Morning grain, wheat; mash, gluten meal, shorts, ground oats, cut clover, meat scraps, ground charcoal; afternoon grain, barley.

Tuesday—Morning grain, barley; mash, corn meal, shorts, cut clover, cut green bone; afternoon grain, buckwheat.

Wednesday—Morning grain, wheat; mash, cornmeal, shorts, vegetables, ground oats, bone meal; afternoon grain, corn.

Thursday—Morning grain, scratching food; mash, cornmeal, shorts, cut clover, cut green bone, ground charcoal; afternoon grain, barley.

Friday — Morning grain, wheat; mash, cornmeal, shorts, vegetables, cut green bone, ground charcoal; afternoon grain, barley.

Saturday—Morning grain, barley; mash, cornmeal, shorts, vegetables, cut green bone, ground charcoal; afternoon grain, corn.

Sunday—Morning grain, scratching food; mash, gluten meal, shorts, cut clover, ground oats, bone meal; afternoon grain, wheat.

CHEMISTRY OF GROWTH

Some of the Things Which Are Necessary to the Growth of Trees and Plants.

BY H. H. SHEPARD.

When any substance is burned, or heated to a high degree, in a confined space where not much if any air can enter, it turns to charcoal.

This black charcoal is almost pure carbon, and makes up a large share of the cells and tissues of plants. This carbon comes to the leaves from the carbon dioxide of the air.

Thus it is plain that a large amount of this gas is required in summer to satisfy the needs of the millions of growing plants.

Plant foods are taken from the soil and air. Small amounts come from the soil, and very large amounts come from the air.

Roots of plants push down and out in the soil in search of plant food. They struggle for their share when too many plants grow in one place.

The same is true of leaves. They reach up and out in search of air and light. When growing plants are crowded their leaves struggle for free, open space.

When leaves are shaded by the leaves of other plants they are not able to get as much air and light as they need, hence their growth and fruitfulness are checked.

Since so much carbon is required by growing plants, and there is so small an amount in the air, there is fierce struggle among the leaves. Each leaf tries to get as much air and light as it can.

For this reason most of the leaves of a tree and of many other plants are on the outermost and topmost branches and twigs.

Those on the lower branches and near the center of the tree are shut away from air and light, hence they are able to do only a little work.

Climbing vines creep and clamber up and over high objects to get into free, open space. They carry their leaves upward and outward to where they can get plenty of sun forces and carbon.

Many plants in the woods spring up early in the season. They do this in order to get needed light and air before the trees put forth their leaves to shut them out.

When the forest trees have come into full leaf these early spring plants have finished their growth. Then they go to sleep in the protecting soil to await the coming of the new spring.

Besides eating carbon dioxide from the air and taking in sunshine, growing leaves give off water. When the roots drink up foods from the soil, these foods are dissolved in large quantities of water.

It all flows to the leaves to mix with carbon dioxide and be made into organic compounds. Some water is used in the food-making process, but a large amount is not needed and is thrown off by the leaves.

Water thrown off by the leaves in the food-making process flies away into the air as vapor.

The vapor of course cannot be seen, yet it is escaping from active leaves all the time.

On sunny days and in dry weather water evaporates from leaves very fast. At such times, if there is plenty of water in the soil to be pumped up to the leaves they remain fresh and do a vast amount of work. If, however, at such times the soil should be dry the leaves will give off more water than is supplied them; hence they wilt or roll up.

USEFUL DAIRY SUGGESTIONS

A man who is feeding silage this winter for the first time says that it is surprising how it cuts the cost of milk.

In every dairying neighborhood there are plenty of farmers who are feeding a dozen cows the year around to produce the same amount of butter fat that half a dozen good cows would give.

A curry comb and a good stiff brush applied with grit and patience, especially in the spring, will do the cows good and make them feel good, too.

Hurry the pails of fresh milk out of the stable just as soon as you can after milking. Milk is just like a sponge about taking in foul odors.

Good authorities say it should take butter about three-quarters of an hour to come. If it does not perhaps the cream or the churning room are too cold.

The cows need fresh air, exercise and all the sunshine they can get these days.

The cows will pay us back in good milk and butter if we remember that they enjoy vegetables along with their hay and supply their wants. They must miss the green grass dreadfully these white days.

Never complain about a cow's big appetite. The more hay you carry to her manger the more milk she will ing the heavy milker.

See that the cows have a warm shelter these cold nights. Chilly cows don't give much milk.

On bright days open the stable windows and let the sunshine in. Then open the doors and let the cows out.

Provide plenty of good bedding in the cow stable.

Every milker who is rough with the cows should retire from that business at once.

If a cow is a machine to change food into milk she appreciates kindness.

Dip the grain scoop deep when feeding the heavy milker.

Feed no dry, dusty fodder before milking. If dusty, sprinkle.

For the hundredth time! Wash the udder just before milking and wipe with a clean cloth or sponge.

Abe Snyder, a farmer living near Owasso, Okla., was bitten by a cow afflicted with rabies. He died a few days afterward. The cow had been bitten by a dog two weeks before, but showed no signs of the disease until she attacked her master as he was milking her.